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(54) Title of Utility Model: **Suture Thread For Tissue Inside Body Cavity**

(21) Application Number: **53-62912**

(22) Application Date: May 11, 1978

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(57) **Claim**

A suture thread for tissue inside a body cavity, wherein said suture thread comprises flexible suture thread, a pullout-preventing tip attached to the end of the suture thread, and a fixture through which said suture thread is passed and attached so as to be able to move freely towards the end with the pullout-preventing tip and from which the suture thread cannot be pulled out even when pulled from the end with the pullout-preventing tip.

Brief Explanation of the Drawings

FIG 1 is a cross-sectional view of the tip portion of the suture needle in the first working example. FIG 2 is a plane view of the tip portion of the same. FIG 3 through FIG 8 are drawings used to explain the use of the first working example. FIG 9 is a cross-sectional view of the tip portion of the second working example of the present utility model. FIG 10 is a cross-sectional view of the tip portion of the third working example of the present utility model. FIG 11 is a cross-sectional view of the tip portion of the fourth working example of the present utility model. FIG 12 is a cross-sectional view of the tip portion of the fifth working example of the present utility model. FIG 13 is a cross-sectional view of the tip portion of the sixth working example of the present utility model. FIG 14 through FIG 17 are cross-sectional views of a different attachment for the sixth working example. FIG 18 through FIG 22 are drawings used to explain the use of the sixth working example. FIG 23 is a cross-sectional view of the tip portion of the suture needle in the seventh working example.

1 ... suture needle main body, 2 ... tissue, 3 ... piercing needle portion, 4 ... opening portion, 5 ... inside hole, 6 ... receiving portion, 7 ... pullout-preventing tip, 8 ... indentation, 9 ... suture thread, 10 ... attachment hole, 11 ... pullout wire, 12 ... bleed portion, 13 ... clip, 14 ... outer covering tube, 15 ... piercing needle portion, 16 ... receiving portion, 17 ... through-hole, 18 ... opening portion, 19 ... tube, 20 ... outer covering tube, 21 ... tube-shaped component, 22 ... fixture, 23 ... inner cavity, 24 ... component, 25 ... constricting component, 26 ... inner wall, 27 ... knot, 28 ... hole, 29 ... attachment component, 30 ... cavity, 31 ... elastic plate, 32 ... through-hole, 33 ... attachment component, 34 ... through-hole, 35 ... elastic component, 36 ... outer covering tube

[FIGS 1 -23 follow]

Amendment 79.1.23

The brief explanation of the drawings has been amended as follows.

"37 ... manipulation component, 38 ... component for drawing through, 39 ... clip" has been added to line 8 on page 15 of the specification. Also, "clip" has been changed to "body cavity" in line 16 on page 14 of the specification.

Amendment 79.6.12

The following drawings have been amended.

FIG 1

FIG 5

FIG 9

FIG 13

Amendment 79.1.23

The following drawings have been amended.

FIG 8

FIG 12

FIG 23

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識別記号 ⑬日本分類
94 A 224

庁内整理番号 ⑭公開 昭和54年(1979)11月21日
6617-4C

審査請求 未請求

(金 6 頁)

⑮体腔内組織用縫合糸

⑯実 願 昭53-62912

⑰出 願 昭53(1978)5月11日

⑱考 案 者 荻生久生

八王子市大和田町4の22の13

⑲考 案 者 下中秀樹

八王子市大和田町4の22の13

⑳出 願 人 オリンパス光学工業株式会社

東京都渋谷区幡ヶ谷2丁目43番
2号

㉑代 理 人 弁理士 鈴江武彦 外2名

㉒実用新案登録請求の範囲

柔軟な縫合糸と、この縫合糸の先端に取り付けられた抜止めチップと、上記縫合糸の途中に抜止めチップ側へ移動自在に装着され抜止めチップ側から縫合糸を引いても抜けない固定具とからなる体腔内組織用縫合糸。

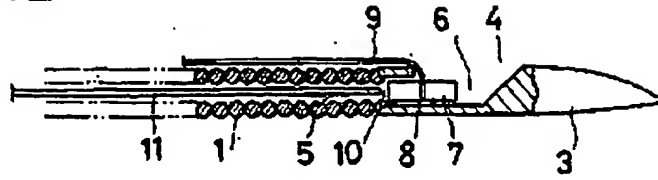
図面の簡単な説明

第1図は縫合針の第1の実施例を示すその先端部の側断面図、第2図は同じくその先端部の平面図、第3図ないし第8図は順次第1の実施例のもの使用手順を示す説明図、第9図は第2の実施例を示すその先端部の側断面図、第10図は第3の実施例を示すその先端部の側断面図、第11図は第4の実施例を示すその先端部の側断面図、第12図は第5の実施例を示すその先端部の側断面図、第13図は第6の実施例を示すその先端部の側断面図、第14図ないし第17図はそれぞれ第6の実施例に適用する異なる固定具の断面図、第

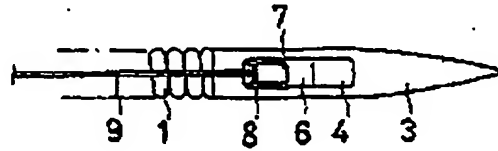
18ないし第22図はその第6の実施例の使用手順を示す説明図、第23図は縫合針の第7の実施例を示すその先端部の側断面図である。

1……縫合針本体、2……組織、3……刺通針部、4……開口部、5……内孔、6……収納部、7……抜止めチップ、8……くぐり、9……縫合糸、10……嵌合孔、11……押出しワイヤ、12……出血部、13……クリップ、14……外套チューブ、15……刺通針部、16……収納部、17……挿通用孔、18……開口部、19……チューブ、20……外套管、21……しごき用管状部材、22……固定具、23……内腔、24……部材、25……絞付け部材、26……内壁、27……結び目、28……孔、29……固定部材、30……腔部、31……弾性片、32……挿通孔、33……固定部材、34……挿通孔、35……弾性部材、36……外套管。

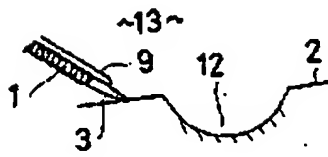
第1図



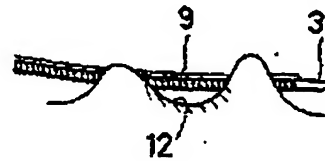
第2図



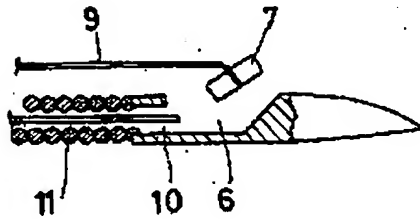
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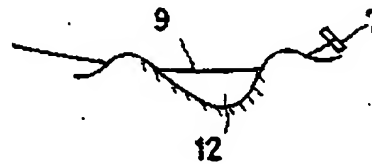
第4図



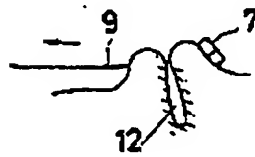
第5図



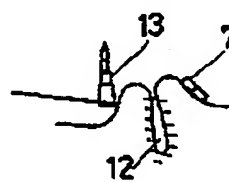
第6図



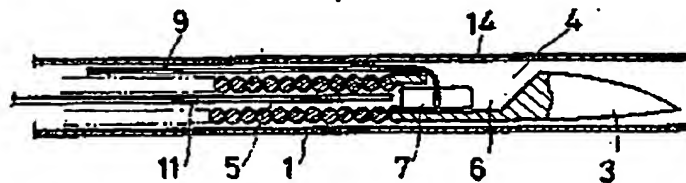
第7図



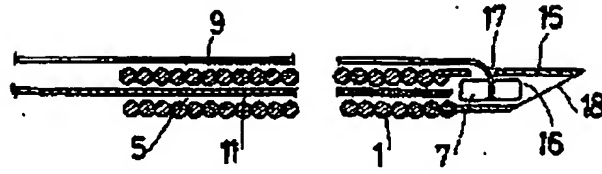
第8図



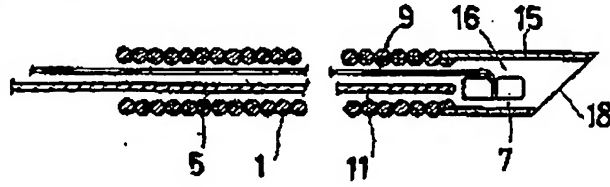
第9図



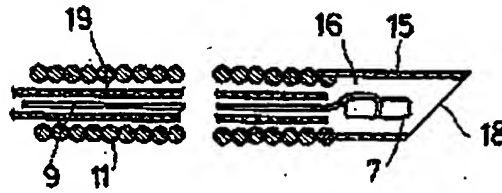
第 10 図



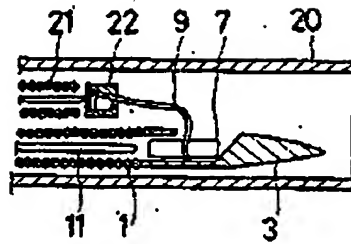
第 11 図



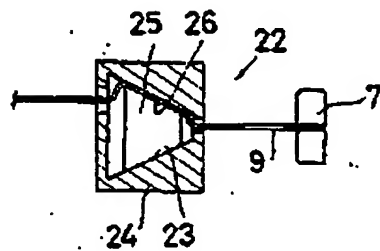
第 12 図



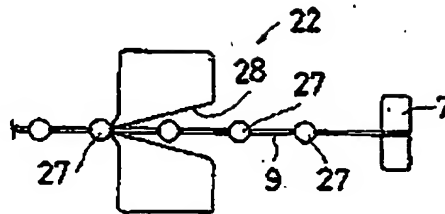
第 13 図



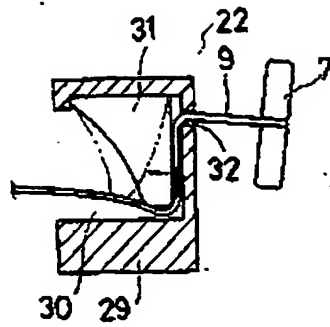
第 14 図



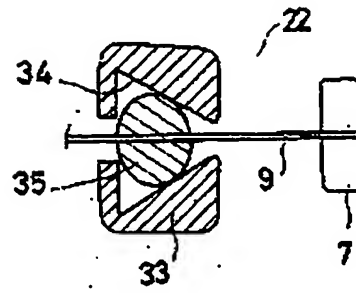
第 15 図



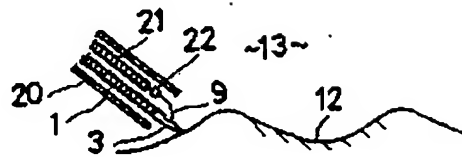
第16図



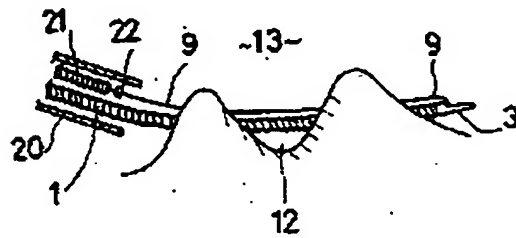
第17図



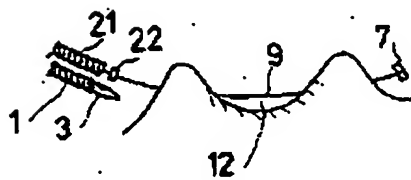
第18図



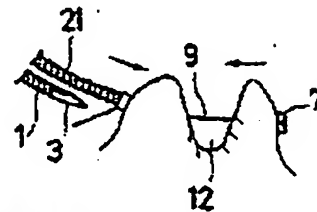
第19図



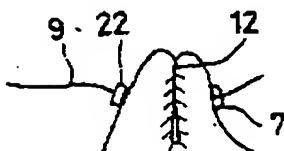
第20図



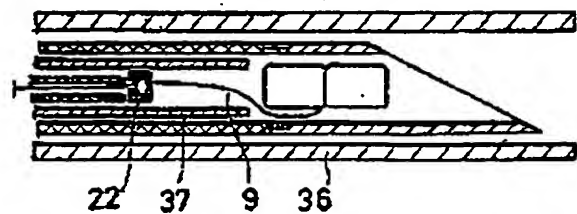
第21図



第22図



第23図



補正 昭54.1.23

図面の簡単な説明を次のように補正する。

明細書第15頁第8行目の次に「37……操作部材、38……しこくための部材、39……クリ

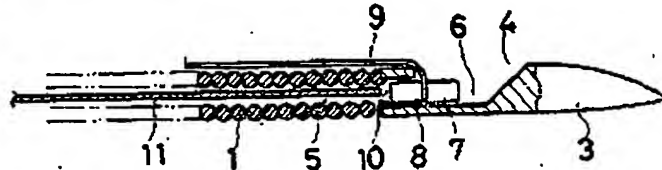
ップ」を追加する。

明細書第14頁第16行目の「クリップ」を「体腔」と補正する。

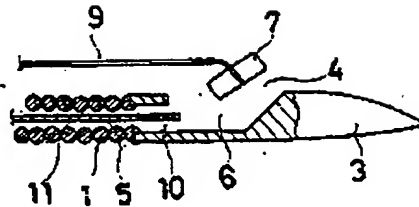
補正 昭54.6.12

第1図

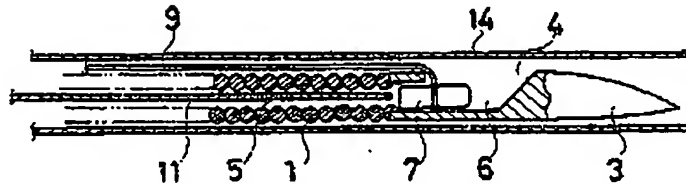
図面を次のように補正する。



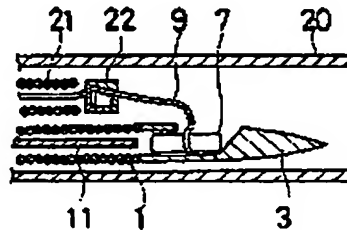
第5図



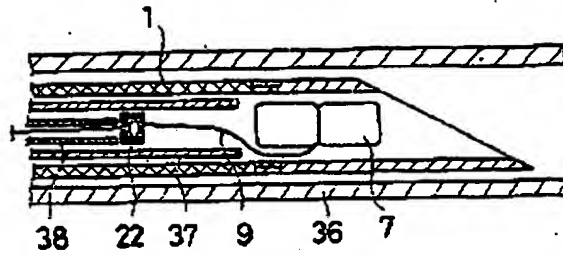
第9図



第13図



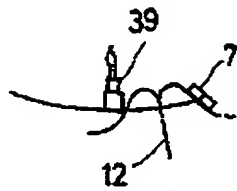
第23図



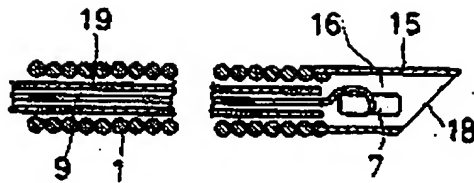
補正 昭54.1.23

図面を次のように補正する。

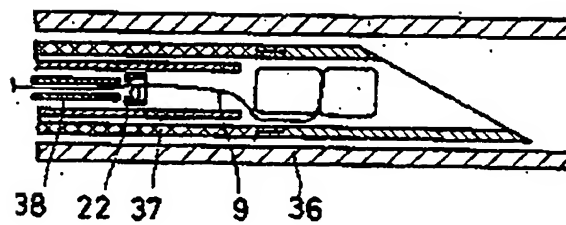
第8図



第12図



第23図



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